REMARKS/ARGUMENTS

Claims 1-12 were pending. Following this response, claims 1-12 will remain pending.

In the Office Action, the Examiner rejected claims 1, 3 and 8 under 35 USC §112, ¶1 as failing to comply with the enablement requirement and rejected claims 1-12 under 35 USC §103(a) as being unpatentable over "TCP-like Congestion Control for Layered Multicast Data Transfer" by Vicisano et al. (hereinafter "Vicisano"), in view of US Patent No. 6,505,253 issued to Chiu et al. (hereinafter "Chiu").

The rejection under §112 appears to relate to the Examiner's concerns as to whether the language added to claims 1, 3 and 8 in the immediately prior amendment is supported by the originally filed disclosure. In each case, the added language was "independent of receiver feedback" as it relates to reducing a sending rate of a layer.

The Examiner is directed to page 14, lines 27-35 of the specification as originally filed. As explained there, a server can vary send rates on different layers over time including reducing the send rate on layers over time in order to reduce a reception rate without an explicit leave request from a receiver. Receivers decrease their reception rate quickly by not joining any additional layers, rather than by requesting a lower rate from the sender. Instead of a receiver reducing its receive rate by sending a leave message (or other message) to the sender, it passively reduces its receive rate by not joining additional layers. This is set forth at page 20, lines 21-26 of the specification and elsewhere. In order for receivers to keep their reception rate the same, they occasionally join layers at a moderate pace, and in order to increase their reception rate they occasionally join layers at a more aggressive pace. See, Specification, page 14, lines 32-34. The specification teaches that a sender's sending rates of layers reduce to zero ("reducing a sending rate of a layer") even if the sender is not aware that no interested recipients remain ("independent of receiver feedback"), as explained at page 7, lines 4-10.

In view of the above, Applicant expects that the §112 rejection has been overcome.

As for the §103(a) rejection, Applicant submits that neither Vicisano nor Chiu disclose or suggest each element of any claim. For example, claim 1 recites, among other features, "logic for reducing the sending rate of at least one of the plurality of layers over time." The Examiner concedes that Vicisano does not explicitly teach this element, but cites portions of Chiu as teaching this element.

Vicisano discloses multicasting using a number of layers, where each layer has a different bandwidth (i.e., sending rate) (p. 997). Receivers can adjust their reception rate according to network conditions by joining or leaving layers (p. 998), which implies that the receiving rate may change. However, the receiving rate does not change over time for a layer. Instead, all that Vicisano suggests is that, over time, a receiver can join and leave layers to reduce (or increase) the receiver's reception rate, in response to loss rates or for any other reason. There is no suggestion that the sending rate of a layer is reduced over time.

Similarly, independent claim 3 recites a step of "reducing the sending rates for each of the layers over time." As discussed above, since Vicisano fails to disclose or suggest reducing a sending rate for a layer over time, it necessarily also fails to disclose or suggest reducing the sending rates for each of the layers over time.

Independent claim 8 includes steps of "reducing a sending rate for a first one of the plurality of dynamic layers over time" and "concurrently with the step of reducing, increasing a sending rate of at least one other of the plurality of dynamic layers." As discussed above, Vicisano does not teach or suggest changing the sending rate of any layer over time, much less the changing of the sending rate of any layer.

Chiu was cited as teaching reducing a sending rate over time as claimed. Chiu in fact shows adjusting for a network rate based on congestion feedback. Notably, the portions of Chiu cited by the Examiner show this. See, for example, col. 9, lines 47-48 ("Upon receipt of an ACK message indicating that packets have been lost"), col. 12, lines 54-55 ("After receipt of a congestion report, the sender reduces its data transmission rate"), col. 22, lines 27-28 ("In reaction to a congestion message"), and col. 24, lines 59-62 ("As a result of receiving congestion feedback information from one or more receivers, the sender attempts to reduce the rate of transmission to accommodate the slow receivers"). Thus, it is clear that the system of Chiu does

not reduce "the sending rate...over time," but keeps its sending rate constant over time until it receives an indication of congestion, i.e., receiver feedback.

To further clarify this point, claims 1, 3 and 8 have been amended to recite that a sending rate is reduced independent of receiver feedback, which is clearly not taught or suggested by Chiu. As explained in the specification as originally filed, there are disadvantages to having a system wherein a sender reduces a sending rate only after receiving a leave message from a receiver, in that it might take some time for the sender to receive the leave message and, for the period between the sending of the leave message from the receiver and the receipt of the leave message at the sender, network bandwidth may well be wasted, causing unnecessary congestion. In contrast, as is now clearly claimed, the sending rate is reduced independent of receiver feedback. As a result, a receiver can simulate a leave operation passively, by not joining additional layers.

In view of the above, Applicant submits that it is apparent that Vicisano and Chiu, taken alone or in combination do not disclose or suggest each element of the claims and therefore, those claims should be allowed over those references.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

2/21/06

Respectfully submitted,

Philip H. Albert
Reg. No. 35,819

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 650-326-2400 Fax: 415-576-0300
PHA:djb
60708076 v1